



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-6898; Directorate Identifier 2016-NM-010-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model MD-90-30 airplanes. This proposed AD was prompted by reports of stick shaker activation at airspeeds that were above the stall protection system's stick shaker schedule. This proposed AD would require installing angle-of-attack (AOA) sensor external case heaters and AOA sensors, changing wires, and doing a functional test and applicable corrective actions. We are proposing this AD to correct water intrusion and subsequent ice formation between the AOA sensor vane and face plate, which could cause the vane to become immobilized. If the vane becomes immobilized, the stall protection system could become unreliable or non-functional, which could result in loss of control of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, CA 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet by searching for and locating Docket No. FAA-2016-6898.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-6898; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Eric Igama, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5388; fax: 562-627-5210; email: roderick.igama@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2016-6898; Directorate Identifier 2016-NM-010-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We received reports of stick shaker activation at airspeeds that were above the stall protection system’s stick shaker schedule. Stall protection system anomalies have been reported on Model 717-200 airplanes related to the AOA sensor becoming immobilized and reporting incorrect AOA alpha values. Boeing investigated and found potential water intrusion and subsequent ice formation between the AOA sensor vane and face plate could cause the vane to become immobilized until the airplane is operated at temperatures above freezing. Model MD-90 airplanes use the same AOA sensors as the Model 717 airplanes and the same potential for AOA vane immobilization exists. This condition, if not corrected, could cause the vane to become immobilized. If the vane becomes immobilized, the stall protection system could become unreliable or non-functional, which could result in loss of control of the airplane.

Related Service Information under 1 CFR part 51

We reviewed Boeing Alert Service Bulletin MD90-30A029, dated November 25, 2015. The service information describes procedures for installing AOA sensor external case heaters and AOA sensors, changing wires, and doing a functional test and applicable corrective actions. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously. For information on the procedures, see this service information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-6898.

The phrase “corrective actions” is used in this proposed AD. “Corrective actions” are actions that correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

Costs of Compliance

We estimate that this proposed AD affects 95 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Installation of AOA sensor external case heaters and AOA sensors, changing wires, and doing a functional test	Up to 44 work-hours (depending on the group number) X \$85 per hour = \$3,740	Up to \$1,220 (depending on the group number)	Up to \$4,960 (depending on the group number)	Up to \$471,200 (depending on the group number)

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2016-6898; Directorate Identifier 2016-NM-010-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model MD-90-30 airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 34, Navigation.

(e) Unsafe Condition

This AD was prompted by reports of stick shaker activation at airspeeds that were above the stall protection system's stick shaker schedule. We are issuing this AD to correct water intrusion and subsequent ice formation between the angle-of-attack (AOA) sensor vane and face plate, which could cause the vane to become immobilized. If the vane becomes immobilized, the stall protection system could become unreliable or non-functional, which could result in loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Installation of AOA Sensor External Case Heater

Within 6 years after the effective date of this AD, install AOA sensor external case heaters and AOA sensors, change wires, and do a functional test and applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin MD90-30A029, dated November 25, 2015. All applicable corrective actions must be done before further flight.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in

paragraph (i)(1) of this AD. Information may be emailed to: 9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (h)(4)(i) and (h)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(i) Related Information

(1) For more information about this AD, contact Eric Igama, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5388; fax: 562-627-5210; email: roderick.igama@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, CA 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on June 3, 2016.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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